

S-VZFC Series

Limit Switch Box Polyamide



Reference	Switch type	Switch capacity	Switch function
V3HH6	Micro-switch	250 VAC / 10 A-12 - 250 VDC / 2.5 A	2x changeover
V3HH7	Inductive sensor	10 - 30 VDC / 100 mA	2x closer (PNP)
V3HH8	NAMUR sensor	8 VDC / 1 mA (3 mA non-damped)	2x closer (PNP)
V3HH9	3/2-way pneumatic valve	1 - 8 bar (pneumatic)	2 NC breakers (pneumatic)

ENGLISH

Materials:

Housing: PA6, cover: Polycarbonate, selector shaft: PA6, seals: EPDM and NBR, assembly bridge: PA6, screws: 1.4301

Temperature range:

-20°C up to max. +80°C (V3HH9: -10°C up to max. +60°C)

Protection class:

IP 67 (V3HH9: IP 65)

Connection dimensions:

Fits hole patterns 50 x 25, 80 x 30 and 130 x 30, shaft height variably adjustable between 20 and 30 mm, **fits all common drives but not size 50 PAL actuators.**

Warning:

For assembly on actuators of size 1 in connection with Namur valve, it may be necessary to assemble a spacer plate (V2N28) between the valve and the actuator.

NEDERLANDS

Materialen

Behuizing: PA6, deksel: Polycarbonaat, schakelas: PA6, afdichtingen: EPDM en NBR, montagebrug: PA6, schroeven: 1.4301

Temperatuurbereik:

-20°C tot max. +80°C (V3HH9: -10°C tot max. +60°C)

Beschermingsklasse:

IP 67 (V3HH9: IP 65)

Afmetingen aansluiting:

Past op boormallen 50 x 25, 80 x 30 en 130 x 30, ashoogte variabel instelbaar tussen 20 en 30 mm, past op alle gangbare aandrijvingen, **maar niet op PAL-actuatoren van maat 50.**

Let op:

Bij montage op aandrijvingen met grootte 1 in combinatie met Namur-klep moet eventueel een afstandsplaat (V2N28) tussen de klep en de aandrijving worden gemonteerd.

DEUTSCH

Werkstoffe:

Gehäuse: PA6, Deckel: Polycarbonat, Schaltwelle: PA6, Dichtungen: EPDM und NBR, Montagebrücke: PA6, Schrauben: 1.4301

Temperaturbereich:

-20°C bis max. +80°C (V3HH9: -10°C bis max. +60°C)

Schutzart:

IP 67 (V3HH9: IP 65)

Anschlussmaße:

Passt auf Bohrbilder 50 x 25, 80 x 30 und 130 x 30, Wellenhöhe variabel einstellbar zwischen 20 und 30 mm, passt auf alle gängigen Antriebe, **jedoch nicht bei PAL-Aktuatoren der Größe 50.**

Achtung:

Bei Montage auf Antrieben der Größe 1 in Verbindung mit Namurventil muss ggf. eine Distanzplatte (V2N28) zwischen Ventil und Antrieb montiert werden.

FRANÇAIS

Matériaux:

boîtier: PA6, couvercle: polycarbonate, arbre à came: PA6, joints: EPDM et NBR, pont de montage: PA6, vis: 1.4301

Plage de température:

-20°C à max. +80°C (V3HH9: -10°C à max. +60°C)

Indice de protection:

IP 67 (V3HH9: IP 65)

Dimensions de raccordement:

Convient à des gabarits de forage 50 x 25, 80 x 30 et 130 x 30, hauteur d'ondulation réglable de façon variable entre 20 et 30 mm, convient à tous les entraînements courants, **mais pas sur les actionneurs PAL de taille 50.**

Attention:

en cas de montage sur des actionneurs de taille 1 en liaison avec une vanne Namur, il faut monter le cas échéant une plaque d'écartement (V2N28) entre la vanne et l'actionneur.

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General description

Limit switch boxes are used to provide feedback and check the position of valves that are actuated by pneumatic quarter-turn actuators. The modules can be quickly and easily mounted on the intended actuator or valve using the supplied mounting material. The shaft of the limit switch box is positively connected to the shaft of the quarter-turn actuator and is rotated with the rotary movement of the actuator. The switching cams attached to the shaft thereby actuate the built-in switches, which are used for electronic signal transmission.

Safety instructions

To avoid faults, the devices may only be installed, connected and commissioned by qualified personnel. Always observe the following safety instructions before commissioning:

- Use the labeling to check whether the existing device is suitable for your application.
- Observe the national regulations and provisions as well as the corresponding installation regulations.
- Take suitable measures to prevent unintentional activation or unauthorized interference with the device.
- Remove any sealing plugs immediately before inserting the cables to avoid soiling the housing.
- Ensure sufficient strain relief for connection cables or lay them securely.
- Protect devices and cables effectively against damage.
- Avoid static charges on plastic appliances and cables. Only clean the appliance with an antistatic or damp cloth.
- Metal housing parts must be included in the equipotential bonding by means of suitable mounting.
- The appliance may only be operated when fully assembled.
- Never disconnect connecting cables when they are live.

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Montage

When dismantling, be sure to follow the safety instructions.

The modules can be quickly and easily installed on the intended actuator or fitting using the enclosed fastening material in accordance with VDI/VDE 3845.

- 1) Move your actuator to the end position in which the groove of the drive shaft is parallel to the actuator housing.
- 2) Now place the box with the appropriate mounting bridge on the actuator.
- 3) The mounting bridge can now be screwed onto the actuator with the supplied locking screws (4 pcs.).
- 4) Loosen the four cover screws and open the housing. Make sure that you do not unscrew the screws too far so that they remain in the cover.
- 5) Feed the system cable through the cable gland into the housing and wire the individual wires to the terminal block. Observe the terminal diagram on the corresponding data sheet or on the housing cover and connect the housing to the potential equalization.
- 6) Close the housing with the cover. When fitting the cover, ensure that the seal is in the correct position and tighten the cover screws securely.

Demontage

When dismantling, be sure to follow the safety instructions.

- 1) Disconnect the housing from the power supply.
- 2) Open the cover of the housing by loosening the 4 cover screws. Make sure that you do not unscrew the screws too far so that they remain in the cover and cannot fall off.
- 3) Disconnect the system cables from the terminal strip in the limit switch box.
- 4) Now loosen the 4 screws that secure the bridge of the box to the rotary actuator and remove the limit switch box from the actuator.

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Setting the Limit Switch Box

The limit switch boxes are preset to a swivel range of 0-90°. If you require a different swivel range for your application, please carry out the following steps:

- 1) Remove the visual indicator.
- 2) Move the operator to the desired end position 1 and set the lower actuator. To do this, press the actuator down on the outer ring and turn it to the position in which the switch is actuated. Allow the actuator to snap back up into the teeth.
- 3) Move the operator to the desired end position 2 and adjust the upper actuator. To do this, press the actuator down on the outer ring and turn it to the position in which the switch is actuated. Allow the actuator to snap back up into the teeth.
- 4) Finally, check your presetting by switching the rotary actuator several times.
- 5) Now replace the optical indicator on the shaft.

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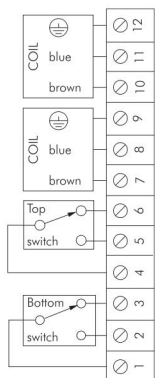
Maintenance

During prolonged outdoor operation and when using the limit switch boxes at very high or very low ambient temperatures, the seals on the shaft and in the housing cover can become brittle. Safe operation can only be guaranteed with a tight housing. Seals must be replaced as soon as they are worn out at the latest after 5 years.

Malfunctions

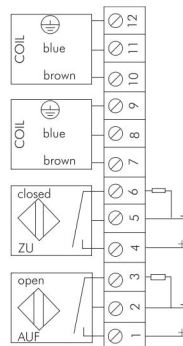
In the event of faults, check the lines, line connections and cam position. Also check whether condensation has collected in the housing and whether the valve and the part-turn actuator are working properly and rectify any faults. If this does not rectify the fault, disconnect the housing from the power supply and contact authorized and trained specialist personnel.

Connection diagrams



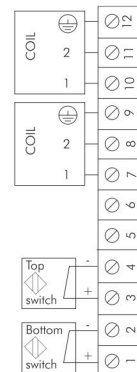
V3HH6

Voltage: 250 V
Max. current: 16 A (250V AC), 2.5 A (24V DC)
Contacts: silver
Temperature: -20°C to +80°C
Hole pattern actuator: 50 x 25 mm
Shaft height actuator: 20 mm



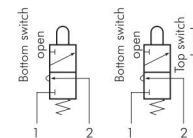
V3HH7

Voltage: 10-30V DC
Current consumption: 100mA,
Switching frequency: 1000Hz
No-load current: 15mA
Display: LED yellow
Temperature: -25°C to +80°C
Hole pattern actuator: 50 x 25 mm
Shaft height actuator: 20 mm



V3HH8

Voltage: 8V DC
Measuring plate detected: 1mA
Measuring plate not detected: 3mA
Switching frequency: 1000Hz
Temperature: -25°C to +100°C
Hole pattern actuator: 50 x 25 mm
Shaft height actuator: 20 mm



V3HH9

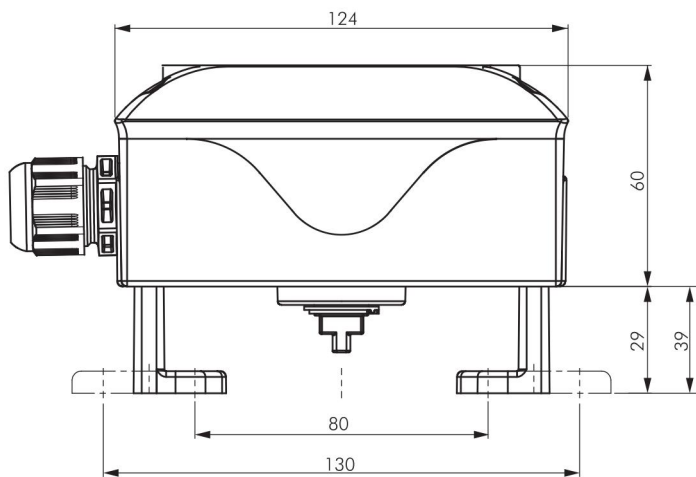
Operating pressure: 1-8 bar
Temperature: -10°C to +60°C
Connection: 1/8"
Hole pattern actuator: 50 x 25 mm
Shaft height actuator: 20 mm

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Dimensions

V3HH6, V3HH7, V3HH8



V3HH9

